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Dear Dr Kerry Schott AO

***National Energy Guarantee: Draft design consultation paper***

Ausgrid welcomes the opportunity to make a submission in response to the Energy Security Board's (ESB) National Energy Guarantee (**Guarantee**) Draft Design Consultation Paper.

Ausgrid is the largest electricity network distributor on Australia's east coast, connecting more than 1.7 million homes and businesses across Sydney, the Central Coast and the Hunter regions. Although our customers all have different energy needs, they have three common priorities: energy has to be affordable, reliable and sustainable. We share these priorities with our customers and are aligning our network investment and operating decisions accordingly.

We also recognise that to solve the trilemma of affordability, reliability and sustainability a 'whole of system' response is required, and for that reason we welcome the establishment of the ESB as an independent authority with oversight over both energy and climate change policy across each section of the electricity supply chain. We look forward to working collaboratively with the ESB in the delivery of a lower emission, more reliable power system with enough electricity available when needed, at the lowest possible price.

The generation, storage and movement of electricity are in the midst of transformation. Australia's electricity system was originally built for one-way energy flows from large scale generators to load centres. As customers embrace new technologies that empower them to take control of their energy usage and support action on climate change, a decentralised yet integrated electricity system is emerging. Already, many customers not only draw energy from the electricity system but also store and feed it back to the grid. Among Ausgrid customers, around 120,000 have a solar power system installed, while approximately 1,500 have a battery storage system.

Ausgrid is keeping pace with the ongoing changes in the electricity market. In recent years, this has involved:

- Lowering the cost of connecting solar and batteries and reducing red tape
- Implementing the innovative CoolSaver program where we partnered with 150 residential customers to reduce peak demand from air conditioners using new power saving technology
- Surveying residential and business customers about solar, batteries and energy efficiency to better understand their motivations and preferences for installing new technology and willingness to partner with Ausgrid to reduce demand
- Delivering a large-scale peak rebate program for business customers to refine demand management solutions from this important customer segment
- Investigating the ability of a grid battery to reduce network demand and optimise solar operation for customer benefits
- Exploring innovative approaches to reducing demand from hot water systems

- Testing the charging infrastructure, vehicle performance, behaviour and grid impacts from electric vehicles
- Exploring the ability of residential batteries and fuel cells to reduce customer bills and network demand

Ausgrid agrees with the ESB that a well-designed Guarantee is important to ensuring the electricity sector can meet its share of Australia's international obligation to reduce emissions while supporting reliability of our electricity system. It also has the capability of providing the long-term policy confidence and regulatory certainty needed to bring down electricity prices.

In designing the Guarantee, we encourage the ESB to take into account financial analysis and modelling demonstrating that large scale renewables are, and will remain for the foreseeable future, the most cost effective way to decarbonise. Ongoing tariff reforms that are set to alleviate some of the barriers to the cost effectiveness of certain forms of distributed energy resources (**DER**) should be considered too.

Were possible, Ausgrid believes the ESB should be future focused in designing the Guarantee. We envisage the role of electricity networks to evolve over time to the point where Ausgrid becomes a 'platform' responsible for matching the excess supply produced by a customer owned DER with the energy needs of their neighbours, enabling 'peer-to-peer' trading in electricity. The way customers pay for energy may change too, with 'Blockchain' and other developments in financial technology set to revolutionise consumer transactions.

These changes putting customers at the centre of the electricity system should be incorporated into the design the Guarantee ultimately takes. Both the emissions and reliability requirements of the Guarantee should be cognisant of the movement away from the traditional model of the electricity supply chain heavily reliant on centralised generation, to an energy market in which customer owned DER plays a substantially larger role. Any regulatory requirements which flow through to generators as a result of the NEG should recognise these ongoing changes and not lock in high cost elements into the system that may impose barriers to lower cost solutions as the energy market develops.

We thank the ESB for the opportunity to provide this submission. As a new model of the electricity supply chain emerges, distribution networks will be crucial to enabling the multi-directional exchanges of energy required to maintain reliability and for the most value to be extracted from renewable sources of customer owned generation. We look forward to working with the ESB in designing a Guarantee that incorporates the role of distribution networks and which delivers a more affordable, reliable and sustainable supply of electricity to customers.

If you wish to discuss any aspects of this submission or the design of Guarantee more generally, then please contact Simon Camroux, Ausgrid Head of Regulation, on 0477 707 536 or via email [simon.camroux@ausgrid.com.au](mailto:simon.camroux@ausgrid.com.au).

Regards



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